

IN THE CLAIMS:

Please CANCEL claims 2-23

Please AMEND claims 1 and 24-27; and

Please ADD claims 28-63, as shown below.

1. (Currently Amended) A system for providing data communication between modules connected through a port connector, wherein said modules are ~~adapted~~configured to communicate a data package comprising in a layered structure a physical layer comprising a first and a second segment ~~for encapsulating~~to encapsulate other layers in said data package, a data link layer comprising a first header field for data payload type and a second header field for a data link layer version, and a network/transport layer comprising a third header field for a transmitting module's address, a fourth header field for a length of said data package, a fifth header field for an offset value for determination of data payload start in said data package, and comprising data payload.

2-23 (Cancelled)

24. (Currently Amended) An apparatus, comprising:

~~A~~a receiver unit adapted configured to receive a data package configured to be communicated between modules connected through a port connection, wherein said data package comprises, in a layered structure, physical layer data comprising a first and a second segment to encapsulate other layers in said data package, data link layer data in a first header field comprising data payload type and in a second header field comprising a data link layer version, and network/transport layer data in a third header field comprising a transmitting module's address, in a fourth header field comprising a length of said data package, in a fifth header field comprising an offset value for determination of data payload start in said data package, and comprising data payload.

~~-according to claim 18.~~

25. (Currently Amended) ~~A~~An apparatus, comprising:

a transmitter unit adapted configured to transmit a data package configured to be communicated between modules connected through a port connection, wherein said data package comprises, in a layered structure, physical layer data comprising a first and a second segment to encapsulate other layers in said data package, data link layer data in a first header field comprising data payload type and in a second header field comprising a data link layer version, and network/transport layer data in a third header field comprising a transmitting module's address, in a fourth header field comprising a length of said data package, in a fifth header field comprising an offset value for determination of data payload start in said data package, and comprising data payload.~~according to claim 18.~~

26. (Currently Amended) A method, comprising: for
establishing, by a transmitter, data communication between modules connected
through a port connection, wherein said modules each communicate a data package
comprising in a layered structure a physical layer comprising a first and a second segment
~~for encapsulating~~to encapsulate other layers in said data package, ~~and~~
wherein said ~~method~~ establishing comprising: comprises
providing, in said data package, in a data link layer, a first header field for data
payload type and a second header field for a data link layer version,
providing, in said data package, in a network/transport layer, a third header field
for a transmitting module's address and a fourth header field for a length of said data
package and a fifth header field for an offset value for determination of data payload start
in said data package, and
providing, in said data package, a data payload.

27. (Currently Amended) A computer program embodied on computer-
readable storage medium and comprising code ~~adapted~~ configured to perform the
~~following steps~~ a process when said program is run in a ~~data~~-processor, the process
comprising:

establishing data communication between modules connected through a port
connection, wherein said modules each communicate a data package comprising in a

layered structure a physical layer comprising a first and a second segment to encapsulate other layers in said data package,

wherein said establishing comprises

providing, in said data package, in a data link layer, a first header field for data payload type and a second header field for a data link layer version,

providing, in said data package, in a network/transport layer, a third header field for a transmitting module's address, a fourth header field for a length of said data package, and a fifth header field for an offset value for determination of data payload start in said data package, and

providing, in said data package, a data payload.

~~adapted to establish data communication between modules connected through a port connection, wherein said plurality of modules each communicate a data package comprising in a layered structure having a physical layer comprising a first and a second segment for encapsulating other layers in said data package, and wherein said program providing in said data package in a data link layer a first header field for data payload type and a second header field for a data link layer version, providing in said data package in a network/transport layer a third header field for a transmitting module's address and a fourth header field for a length of said data package, and providing in said data package a data payload.~~

28. (New) The apparatus of claim 24, wherein said data link layer version comprises a major version, which is binary incompatible, and a minor version, which is binary compatible.

29. (New) The apparatus of claim 24, wherein said data package further comprises, in said network/transport layer, a sixth header field prior to said data payload start in said data package for buffering.

30. (New) The apparatus of claim 24, wherein said data package further comprises a checksum field following the data payload.

31. (New) The apparatus of claim 24, wherein said data package further comprises, in said network/transport layer, a seventh header field for a data package number.

32. (New) The apparatus of claim 24, wherein said data package further comprises, in said network/transport layer, an eighth header field for a data package fragment sequence number.

33. (New) The apparatus of claim 24, wherein said first segment of said physical layer comprises a media field for defining media across which the data package is transferred.

34. (New) The apparatus of claim 24, wherein said first segment further comprises a synchronization field for synchronizing the receiving module with the transmitting module.

35. (New) The apparatus of claim 24, wherein said second segment of the physical layer comprises an index byte for providing the receiving module with information regarding segmentation or partitioning of data contained in a message.

36. (New) The apparatus of claim 24, wherein said second segment further comprises a sequence and acknowledge field for providing a receiving module with information whether said data package is an acknowledgement message or an ordinary message.

37. (New) The apparatus of claim 24, wherein said second segment further comprises a sequence and acknowledge field that is configured to inform whether an error was identified in the received data package, when said data package is an acknowledgement message.

38. (New) The apparatus of claim 36, wherein said sequence and acknowledgement field is further configured to inform a receiving module that a sequence number in said receiving module should be reset.

39. (New) The apparatus of claim 36, wherein said sequence and acknowledgement field is configured to recognize acknowledgement messages and detect missing data packages.

40. (New) The apparatus of claim 24, wherein said second segment further comprises a fill field for ensuring that all data packages sent over said port connector contain an even amount of bytes.

41. (New) The apparatus of claim 24, wherein said second segment further comprises a parity field for storing parity calculated on the basis of the data package excluding the parity field.

42. (New) The apparatus of claim 25, wherein said data link layer version comprises a major version, which is binary incompatible, and a minor version, which is binary compatible.

43. (New) The apparatus of claim 25, wherein said data package further comprises, in said network/transport layer, a sixth header field prior to said data payload start in said data package for buffering.

44. (New) The apparatus of claim 25, wherein said data package further comprises a checksum field following the data payload.

45. (New) The apparatus of claim 25, wherein said data package further comprises, in said network/transport layer, a seventh header field for a data package number.

46. (New) The apparatus of claim 25, wherein said data package further comprises, in said network/transport layer, an eighth header field for a data package fragment sequence number.

47. (New) The apparatus of claim 25, wherein said first segment of said physical layer comprises a media field for defining media across which the data package is transferred.

48. (New) The apparatus of claim 25, wherein said first segment further comprises a synchronization field for synchronizing the receiving module with the transmitting module.

49. (New) The apparatus of claim 25, wherein said second segment of the physical layer comprises an index byte for providing the receiving module with information regarding segmentation or partitioning of data contained in a message.

50. (New) The apparatus of claim 25, wherein said second segment further comprises a sequence and acknowledge field for providing a receiving module with information whether said data package is an acknowledgement message or an ordinary message.

51. (New) The apparatus of claim 25, wherein said second segment further comprises a sequence and acknowledge field that is configured to inform whether an error was identified in the received data package, when said data package is an acknowledgement message.

52. (New) The apparatus of claim 50, wherein said sequence and acknowledgement field is further configured to inform a receiving module that a sequence number in said receiving module should be reset.

53. (New) The apparatus of claim 50, wherein said sequence and acknowledgement field is configured to recognize acknowledgement messages and detect missing data packages.

54. (New) The apparatus of claim 25, wherein said second segment further comprises a fill field for ensuring that all data packages sent over said port connector contain an even amount of bytes.

55. (New) The apparatus of claim 25, wherein said second segment further comprises a parity field for storing parity calculated on the basis of the data package excluding the parity field.

56. (New) The method of claim 26, wherein said data link layer version comprises a major version, which is binary incompatible, and a minor version, which is binary compatible.

57. (New) The method of claim 26, further comprising:
providing, in said data package, in said network/transport layer, a sixth header field prior to said data payload start in said data package for buffering.

58. (New) The method of claim 26, further comprising:
providing, in the data package, a checksum field following the data payload.
59. (New) The method of claim 26, further comprising:
providing, in the data package, in said network/transport layer, a seventh header field for a data package number.
60. (New) The method of claim 26, further comprising:
providing, in the data package, in said network/transport layer, an eighth header field for a data package fragment sequence number.
61. (New) The method of claim 26, wherein said first segment of said physical layer comprises a media field for defining media across which the data package is transferred.
62. (New) The apparatus of claim 38, wherein said sequence and acknowledgement field is further configured to inform a receiving module that a sequence number in said receiving module should be reset.

63. (New) The apparatus of claim 39, wherein said sequence and acknowledgement field is configured to recognize acknowledgement messages and detect missing data packages.